



# Seafood Processor

Electives: Value added food products - mince-based products/ Value added food products - pickled products/ Value added food products - battered and breaded or coated products/ Value added food products - intermediate moisture products/ Value added food products - extruded products

QP Code: FIC/Q4003

Version: 1.0

NSQF Level: 3.5

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## **FIC/Q4003: Seafood Processor**

### **Brief Job Description**

The Seafood Processor-Value Added Food Products focuses on quality and safety, producing value-added products such as mince-based, extruded, battered or breaded, and intermediate moisture items. They cover all the steps from Pre-Processing to final packaging of Value-Added products, as per the industry norms.

### **Personal Attributes**

An individual must possess unrelenting attention to detail, to uphold the highest levels of quality control. They must have a strong sense of hygiene, be dedicated to keeping their workplaces spotless, and follow strict guidelines for food safety. An individual must have mental dexterity along with creativity to implement the various processes and invent new value-added goods. For the processing team to effectively collaborate, teamwork and communication skills are essential.

### **Applicable National Occupational Standards (NOS)**

#### **Compulsory NOS:**

1. [FIC/N9026: Prepare for production](#)
2. [FIC/N4005: Carry out pre-processing of fish, seafood, and value-added products.](#)
3. [FIC/N4006: Implementing the processing of fish, seafood and value-added products](#)
4. [FIC/N9906: Apply food safety guidelines in Food Processing](#)
5. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

#### **Electives**(mandatory to select at least one):

##### **Elective 1: Value added food products - mince-based products**

This NOS unit is about carrying out activities for producing mince-based products as per the standards

1. [FIC/N4007: Value added food products - mince-based products](#)

##### **Elective 2: Value added food products - pickled products**

This NOS unit is about carrying out activities for pickled products as per the standards.

1. [FIC/N4009: Value added food products - pickled products](#)

##### **Elective 3: Value added food products - battered and breaded or coated products**

This OS unit is about overseeing the processing of battered and breaded or coated products

1. [FIC/N4010: Value added food products - battered and breaded or coated products](#)

Elective 4: Value added food products - intermediate moisture products

This OS unit is about the processing of intermediate moisture products as per the standards.

1. [FIC/N4011: Value added food products - intermediate moisture products](#)

Elective 5: Value added food products - extruded products

This NOS unit is about carrying out activities for processing extruded products as per the standards.

1. [FIC/N4008: Value added food products - extruded products](#)

### Qualification Pack (QP) Parameters

<b>Sector</b>	Food Processing
<b>Sub-Sector</b>	Fish and Sea Food
<b>Occupation</b>	Processing-Fish and Seafood
<b>Country</b>	India
<b>NSQF Level</b>	3.5
<b>Credits</b>	24
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/7511.9900

<b>Minimum Educational Qualification &amp; Experience</b>	11th Class (Pass) OR 10th Class with 1 Year of experience of relevant experience in the Food Processing Industry OR 8th Class with 3 Years of experience of relevant experience in the Food Processing Industry OR Previous relevant Qualification of NSQF Level (3) with 1-2 Years of experience of relevant experience in the Food Processing Industry OR Previous relevant Qualification of NSQF Level (2.5) with 3 Years of experience of relevant experience in the Food Processing Industry
<b>Minimum Level of Education for Training in School</b>	8th Class
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	NA
<b>Next Review Date</b>	NA
<b>NSQC Approval Date</b>	
<b>Version</b>	1.0

**Remarks:**

NA

## **FIC/N9026: Prepare for production**

### **Description**

This NOS unit is about performing various tasks prior to production in the food processing industry.

### **Scope**

The scope covers the following :

- Plan for production
- Clean and maintain work area, machineries, and tools for production
- Organize for production

### **Elements and Performance Criteria**

#### *Plan for production*

To be competent, the user/individual on the job must be able to:

- PC1.** identify work requirements by obtaining instructions from the supervisor. Instructions: process chart, product flow chart, formulation, chart, etc.
- PC2.** plan and prioritize tasks as per work schedule. Tasks: inspect, clean, maintain, verify, etc.
- PC3.** estimate manpower and material requirements as per work requirement. Material: raw materials and packaging materials
- PC4.** ensure required quantity of raw materials, packaging materials, equipment, and manpower for production
- PC5.** plan capacity utilization of machinery with respect to the processing time, production order, and batch size for each product

#### *Clean and maintain work area, machineries, and tools for production*

To be competent, the user/individual on the job must be able to:

- PC6.** clean and maintain the work area as per organizational procedures
- PC7.** clean and maintain the machines and tools and sanitize them as per the organization's specifications and standards
- PC8.** dispose of the waste material at designated place safely. Waste material: hazardous waste, food waste, packaging waste, etc.
- PC9.** inspect the tools, equipment, and machinery to ascertain suitability for use
- PC10.** report information such as faulty tools and equipment to the concerned authority

#### *Organize for production*

To be competent, the user/individual on the job must be able to:

- PC11.** organize tools and equipment
- PC12.** receive and organize production materials appropriately. Production materials: raw materials, packaging materials, etc.
- PC13.** allot responsibilities/work to the assistants and helpers

### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** production planning process
- KU2.** analysis and interpretation of various process charts, product flow charts, etc.
- KU3.** resource management process
- KU4.** procedure to estimate manpower and raw material
- KU5.** capacity utilization calculation
- KU6.** organizational policies and SOP on cleanliness
- KU7.** operating procedure and general maintenance of food production machineries
- KU8.** waste management procedures
- KU9.** methods to inspect tools, equipment and machinery
- KU10.** procedure to allot work or responsibility to the team

### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** read and interpret organizational policies, SOP, production charts, etc.
- GS2.** communicate effectively with subordinates as well as supervisors
- GS3.** plan and prioritize various tasks
- GS4.** be always punctual and courteous
- GS5.** organize all process/equipment manuals to access information easily
- GS6.** discuss task lists, schedules, and activities with the senior/supervisor



**Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Plan for production</i>	<b>11</b>	<b>25</b>	-	-
<b>PC1.</b> identify work requirements by obtaining instructions from the supervisor. Instructions: process chart, product flow chart, formulation, chart, etc.	3	6	-	-
<b>PC2.</b> plan and prioritize tasks as per work schedule. Tasks: inspect, clean, maintain, verify, etc.	2	5	-	-
<b>PC3.</b> estimate manpower and material requirements as per work requirement. Material: raw materials and packaging materials	2	4	-	-
<b>PC4.</b> ensure required quantity of raw materials, packaging materials, equipment, and manpower for production	2	5	-	-
<b>PC5.</b> plan capacity utilization of machinery with respect to the processing time, production order, and batch size for each product	2	5	-	-
<i>Clean and maintain work area, machineries, and tools for production</i>	<b>14</b>	<b>32</b>	-	-
<b>PC6.</b> clean and maintain the work area as per organizational procedures	3	7	-	-
<b>PC7.</b> clean and maintain the machines and tools and sanitize them as per the organization's specifications and standards	3	7	-	-
<b>PC8.</b> dispose of the waste material at designated place safely. Waste material: hazardous waste, food waste, packaging waste, etc.	3	7	-	-
<b>PC9.</b> inspect the tools, equipment, and machinery to ascertain suitability for use	3	6	-	-
<b>PC10.</b> report information such as faulty tools and equipment to the concerned authority	2	5	-	-
<i>Organize for production</i>	<b>5</b>	<b>13</b>	-	-
<b>PC11.</b> organize tools and equipment	2	7	-	-

<b>Assessment Criteria for Outcomes</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>
<b>PC12.</b> receive and organize production materials appropriately. Production materials: raw materials, packaging materials, etc.	2	4	-	-
<b>PC13.</b> allot responsibilities/work to the assistants and helpers	1	2	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FIC/N9026
<b>NOS Name</b>	Prepare for production
<b>Sector</b>	Food Processing
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Production
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	24/02/2022
<b>Next Review Date</b>	24/02/2025
<b>NSQC Clearance Date</b>	24/02/2022

## **FIC/N4005: Carry out pre-processing of fish, seafood, and value-added products.**

### **Description**

This NOS unit is about pre-processing activities using various methods and machinery as per the specifications and standards of the organization.

### **Scope**

The scope covers the following :

- The scope covers the following:
- Pre-processing preparation
- Perform sorting and grading
- Carry out cleaning and gutting
- Preparation of value-added products

### **Elements and Performance Criteria**

#### *Pre-processing preparation*

To be competent, the user/individual on the job must be able to:

- PC1.** ensure equipment is in good functioning condition without any damage or flaws and is clean from leftovers to avoid cross-contamination
- PC2.** assemble equipment's parts, if necessary. Equipment part: conveyor belt, processing heads
- PC3.** calibrate equipment and test apparatus to ensure accurate measurements and operations. Equipment: scales, thermometers, processing machines, etc.
- PC4.**
  - make necessary modifications to the equipment parameters.
  - Parameters: speed, temperature, pressure, etc.
- PC5.** verify safety safeguards and processes are in place and working
- PC6.** clean all equipment surfaces that may come in contact with seafood using authorized cleaning products and techniques
- PC7.** ensure there is no moisture left after equipment is air-dried or cleaned with sanitized towels
- PC8.** receive supplies and seafood in a dedicated area to avoid cross-contamination with processing facilities
- PC9.** check quality, freshness and presence of any obvious flaws in the incoming seafood and reject the inferior product
- PC10.** keep any seafood in appropriate storage locations and keep temperature under control
- PC11.** keep thorough records of all supplies received, noting their quantity and quality evaluations
- PC12.**
  - examine samples for specific characteristics and check any indications of contamination or spoilage.
  - Characteristics: appearance, colour, texture, odour, etc.
- PC13.** check seafood temperatures once received to ensure that it is within safe temperature limits
- PC14.**
  - take appropriate action in response to inspection findings.
  - Response: Rejection, isolation of inferior seafood, initiating remedial measures, etc

#### *Perform sorting and grading*

To be competent, the user/individual on the job must be able to:

- PC15.** ensure sorting and grading area is clean and organized with all necessary tools and equipment in place
- PC16.**
  - examine products visually to evaluate characteristics.
  - Characteristics: size, colour, texture, general look, etc.
- PC17.**
  - categorize the sorted items into different categories or grades as per predetermined standards.
  - Categories: Premium, standard and reject
- PC18.**
  - measure size and dimensions of products through measuring tools in case size is a grading factor.
  - Measuring tools: Callipers, rulers, etc.
- PC19.**
  - evaluate quality of each product within its category as per specific criteria.
  - Criteria: Freshness, texture, any obvious defects, etc.
- PC20.** document items that were graded and categorized for traceability and quality control
- PC21.** separate physically the items into appropriate bins or containers to retain integrity of each graded product
- PC22.**
  - inform appropriate staff about grading findings and supporting paperwork.
  - Staff: Production supervisors, quality control team, etc.
- PC23.**
  - implement necessary action for products that fall under “reject” category.
  - Actions: Disposal or processing for substitute items, etc.
- PC24.** keep graded items in appropriate locations separately and at the right temperature to avoid cross-contamination

#### *Carry out cleaning and gutting*

To be competent, the user/individual on the job must be able to:

- PC25.**
  - prepare and sanitize workstation along with essential tools and supplies.
  - Tools and supplies: knives, gutting boards, garbage bins, etc.
- PC26.** conduct inspection of each piece of fish or seafood for freshness and any obvious flaws and maintenance to ensure good operator order
- PC27.** remove any scales, if present, from both sides from tail to head through scaler
- PC28.** make a longitudinal cut with a sharp knife down the belly from anal fin to the base of the head after laying fish or seafood on a gutting board
- PC29.** open abdominal cavity gently to remove the guts
- PC30.**
  - remove entrails by using your fingers or a gutting spoon ensuring not puncture gall bladder since it may leak bile with harsh taste.
  - Entrails: Stomach, intestines and other organs
- PC31.** clean body cavity with cold water thoroughly to get rid of any lingering blood or entrail residue
- PC32.** verify fish or seafood is completely cleaned after rinsing with running water or in a container of clean water through visual inspection
- PC33.** remove any extra fins, tails, etc. to give shape to product by using a pair of scissors or a knife
- PC34.** perform visual inspection to make sure cleaned and gutted seafood is of the highest quality and devoid of any lingering pollutants
- PC35.** clean, sort, portion, and examine seafood products to prepare them for individual freezing and keep track of the process by maintaining records
- PC36.** pack or perform additional processing to create goods with the value-addition of cleaned and gutted seafood or fish

**PC37.** clean and sanitize gutting boards, knives and other tools used in the procedure to avoid any cross-contamination

*Preparation of value-added products*

To be competent, the user/individual on the job must be able to:

**PC38.** review ingredients, procedures and preparation process in the recipe or formula

**PC39.** check ingredients for freshness and quality, discarding any subpar ingredients

**PC40.** choose and measure ingredients in accordance with the instructions

**PC41.** follow stringent safety and hygiene procedures by making use of appropriate personal protective equipment (PPE) and maintaining neat/organized workplace

**PC42.** • accurately and consistently prepare items in accordance with recipe's instructions.  
 • Instructions: include washing, chopping, marinating, etc.

**PC43.** setup and calibrate gear or equipment required for specific recipes and ensure it functions as per safety regulations

**PC44.** blend ingredients using order and procedure described in recipe

**PC45.** adhere to criteria for texture and consistency to produce a uniform product

**PC46.** administer taste tests for product's flavours/seasoning and modify them as needed

**PC47.** implement processing aids in accordance with recipe and recommended procedures to produce desired product quality

**PC48.** verify blending meets standards for recipe's flavour, texture and consistency

**PC49.** divide value-added products into portions of uniform sizes or shapes

**PC50.** comply with quality requirements while packaging completed product in proper container

**PC51.** • label product with all necessary information and complies with legal and regulatory standards.  
 • Information: Allergy warnings, etc.

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

**KU1.** food safety regulations and guidelines such as Hazard Analysis and Critical points (HACCP)

**KU2.** safe food handling practices, including handwashing, sanitization, and cross-contamination prevention

**KU3.** various types of sea food, their characteristics, and the specific handling and preparation requirements for each

**KU4.** quality standards including appearance, freshness, and taste standards

**KU5.** qualities and handling need of components used in recipes for value- added products

**KU6.** common food allergies and emphasizing the need to separating ingredients with allergens

**KU7.** how to read and interpret calculations, production directions, and recipes

**KU8.** basic culinary abilities, such as, cutting chopping, marinating, and blending

**KU9.** quality control procedures and capacity to conduct visual and gustatory inspections

**KU10.** environmental rules pertaining to sustainability measures and trash disposal

**KU11.** how to keep detailed records of all actions, including suppliers of ingredients, production dates, and quality inspections

**KU12.** how to operate, maintain and calibrate processing machinery utilized for pre-processing jobs

- KU13.** labeling regulations for food products, including allergens declaration and other required information
- KU14.** step-by-step procedure for equipment setup, sanitization, material handling and quality inspect

### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** ability to identify and address issues or deviations
- GS2.** knowledge of documentation and record-keeping
- GS3.** analyze information and take appropriate actions
- GS4.** prioritize safety and adhering to safety protocols
- GS5.** note down the information communicated by the senior/supervisor, observations (if any) related to the process
- GS6.** communicate effectively with subordinates as well as supervisors
- GS7.** perform calculations related to quantities and measurements
- GS8.** collaborate and contribute to a positive and productive work environment
- GS9.** discuss task lists, schedules, and activities for carrying out production with the senior/supervisor
- GS10.** efficiently manage time

**Assessment Criteria**

<b>Assessment Criteria for Outcomes</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>
<i>Pre-processing preparation</i>	<b>7</b>	<b>14</b>	-	<b>7</b>
<b>PC1.</b> ensure equipment is in good functioning condition without any damage or flaws and is clean from leftovers to avoid cross-contamination	0.5	1	-	0.5
<b>PC2.</b> assemble equipment's parts, if necessary. Equipment part: conveyor belt, processing heads	0.5	1	-	0.5
<b>PC3.</b> calibrate equipment and test apparatus to ensure accurate measurements and operations. Equipment: scales, thermometers, processing machines, etc.	0.5	1	-	0.5
<b>PC4.</b> • make necessary modifications to the equipment parameters. • Parameters: speed, temperature, pressure, etc.	0.5	1	-	0.5
<b>PC5.</b> verify safety safeguards and processes are in place and working	0.5	1	-	0.5
<b>PC6.</b> clean all equipment surfaces that may come in contact with seafood using authorized cleaning products and techniques	0.5	1	-	0.5
<b>PC7.</b> ensure there is no moisture left after equipment is air-dried or cleaned with sanitized towels	0.5	1	-	0.5
<b>PC8.</b> receive supplies and seafood in a dedicated area to avoid cross-contamination with processing facilities	0.5	1	-	0.5
<b>PC9.</b> check quality, freshness and presence of any obvious flaws in the incoming seafood and reject the inferior product	0.5	1	-	0.5
<b>PC10.</b> keep any seafood in appropriate storage locations and keep temperature under control	0.5	1	-	0.5
<b>PC11.</b> keep thorough records of all supplies received, noting their quantity and quality evaluations	0.5	1	-	0.5



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> <ul style="list-style-type: none"> <li>examine samples for specific characteristics and check any indications of contamination or spoilage.</li> <li>Characteristics: appearance, colour, texture, odour, etc.</li> </ul>	0.5	1	-	0.5
<b>PC13.</b> check seafood temperatures once received to ensure that it is within safe temperature limits	0.5	1	-	0.5
<b>PC14.</b> <ul style="list-style-type: none"> <li>take appropriate action in response to inspection findings.</li> <li>Response: Rejection, isolation of inferior seafood, initiating remedial measures, etc</li> </ul>	0.5	1	-	0.5
<i>Perform sorting and grading</i>	<b>5</b>	<b>8.5</b>	-	<b>5</b>
<b>PC15.</b> ensure sorting and grading area is clean and organized with all necessary tools and equipment in place	0.5	1	-	0.5
<b>PC16.</b> <ul style="list-style-type: none"> <li>examine products visually to evaluate characteristics.</li> <li>Characteristics: size, colour, texture, general look, etc.</li> </ul>	0.5	1	-	0.5
<b>PC17.</b> <ul style="list-style-type: none"> <li>categorize the sorted items into different categories or grades as per predetermined standards.</li> <li>Categories: Premium, standard and reject</li> </ul>	0.5	1	-	0.5
<b>PC18.</b> <ul style="list-style-type: none"> <li>measure size and dimensions of products through measuring tools in case size is a grading factor.</li> <li>Measuring tools: Callipers, rulers, etc.</li> </ul>	0.5	1	-	0.5
<b>PC19.</b> <ul style="list-style-type: none"> <li>evaluate quality of each product within its category as per specific criteria.</li> <li>Criteria: Freshness, texture, any obvious defects, etc.</li> </ul>	0.5	1	-	0.5
<b>PC20.</b> document items that were graded and categorized for traceability and quality control	0.5	1	-	0.5
<b>PC21.</b> separate physically the items into appropriate bins or containers to retain integrity of each graded product	0.5	1	-	0.5

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC22.</b> <ul style="list-style-type: none"> <li>inform appropriate staff about grading findings and supporting paperwork.</li> <li>Staff: Production supervisors, quality control team, etc.</li> </ul>	0.5	0.5	-	0.5
<b>PC23.</b> <ul style="list-style-type: none"> <li>implement necessary action for products that fall under "reject" category.</li> <li>Actions: Disposal or processing for substitute items, etc.</li> </ul>	0.5	0.5	-	0.5
<b>PC24.</b> keep graded items in appropriate locations separately and at the right temperature to avoid cross-contamination	0.5	0.5	-	0.5
<i>Carry out cleaning and gutting</i>	<b>7</b>	<b>12.5</b>	-	<b>6.5</b>
<b>PC25.</b> <ul style="list-style-type: none"> <li>prepare and sanitize workstation along with essential tools and supplies.</li> <li>Tools and supplies: knives, gutting boards, garbage bins, etc.</li> </ul>	0.5	1	-	0.5
<b>PC26.</b> conduct inspection of each piece of fish or seafood for freshness and any obvious flaws and maintenance to ensure good operator order	0.5	1	-	0.5
<b>PC27.</b> remove any scales, if present, from both sides from tail to head through scaler	0.5	1	-	0.5
<b>PC28.</b> make a longitudinal cut with a sharp knife down the belly from anal fin to the base of the head after laying fish or seafood on a gutting board	0.5	1	-	0.5
<b>PC29.</b> open abdominal cavity gently to remove the guts	0.5	1	-	0.5
<b>PC30.</b> <ul style="list-style-type: none"> <li>remove entrails by using your fingers or a gutting spoon ensuring not puncture gall bladder since it may leak bile with harsh taste.</li> <li>Entrails: Stomach, intestines and other organs</li> </ul>	0.5	1	-	0.5
<b>PC31.</b> clean body cavity with cold water thoroughly to get rid of any lingering blood or entrail residue	0.5	1	-	0.5

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC32.</b> verify fish or seafood is completely cleaned after rinsing with running water or in a container of clean water through visual inspection	0.5	1	-	0.5
<b>PC33.</b> remove any extra fins, tails, etc. to give shape to product by using a pair of scissors or a knife	0.5	1	-	0.5
<b>PC34.</b> perform visual inspection to make sure cleaned and gutted seafood is of the highest quality and devoid of any lingering pollutants	0.5	1	-	0.5
<b>PC35.</b> clean, sort, portion, and examine seafood products to prepare them for individual freezing and keep track of the process by maintaining records	0.5	1	-	0.5
<b>PC36.</b> pack or perform additional processing to create goods with the value-addition of cleaned and gutted seafood or fish	1	1	-	0.5
<b>PC37.</b> clean and sanitize gutting boards, knives and other tools used in the procedure to avoid any cross-contamination	0.5	0.5	-	0.5
<i>Preparation of value-added products</i>	<b>7</b>	<b>14</b>	-	<b>6.5</b>
<b>PC38.</b> review ingredients, procedures and preparation process in the recipe or formula	0.5	1	-	0.5
<b>PC39.</b> check ingredients for freshness and quality, discarding any subpar ingredients	0.5	1	-	0.5
<b>PC40.</b> choose and measure ingredients in accordance with the instructions	0.5	1	-	0.5
<b>PC41.</b> follow stringent safety and hygiene procedures by making use of appropriate personal protective equipment (PPE) and maintaining neat/organized workplace	0.5	1	-	0.5
<b>PC42.</b> <ul style="list-style-type: none"> <li>• accurately and consistently prepare items in accordance with recipe's instructions.</li> <li>• Instructions: include washing, chopping, marinating, etc.</li> </ul>	0.5	1	-	0.5

<b>Assessment Criteria for Outcomes</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>
<b>PC43.</b> setup and calibrate gear or equipment required for specific recipes and ensure it functions as per safety regulations	0.5	1	-	0.5
<b>PC44.</b> blend ingredients using order and procedure described in recipe	0.5	1	-	0.5
<b>PC45.</b> adhere to criteria for texture and consistency to produce a uniform product	0.5	1	-	0.5
<b>PC46.</b> administer taste tests for product's flavours/seasoning and modify them as needed	0.5	1	-	0.5
<b>PC47.</b> implement processing aids in accordance with recipe and recommended procedures to produce desired product quality	0.5	1	-	0.5
<b>PC48.</b> verify blending meets standards for recipe's flavour, texture and consistency	0.5	1	-	0.5
<b>PC49.</b> divide value-added products into portions of uniform sizes or shapes	0.5	1	-	-
<b>PC50.</b> comply with quality requirements while packaging completed product in proper container	0.5	1	-	0.5
<b>PC51.</b> <ul style="list-style-type: none"> <li>• label product with all necessary information and complies with legal and regulatory standards.</li> <li>• Information: Allergy warnings, etc.</li> </ul>	0.5	1	-	0.5
<b>NOS Total</b>	<b>26</b>	<b>49</b>	<b>-</b>	<b>25</b>

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FIC/N4005
<b>NOS Name</b>	Carry out pre-processing of fish, seafood, and value-added products.
<b>Sector</b>	Food Processing
<b>Sub-Sector</b>	Fish and Sea Food
<b>Occupation</b>	Processing-Fish and Seafood
<b>NSQF Level</b>	3.5
<b>Credits</b>	3
<b>Version</b>	1.0
<b>Next Review Date</b>	NA

## **FIC/N4006: Implementing the processing of fish, seafood and value-added products**

### **Description**

This unit is about implementing fish, seafood and value-added product processing using various machinery as per the specifications and standards of the organization.

### **Scope**

The scope covers the following :

- The scope covers the following:
- Perform cleaning, dressing and preserving fish, seafood and value-added products
- Carry out export of fish, seafood and value-added products
- Oversee product packaging, labelling and quality control

### **Elements and Performance Criteria**

#### *Perform cleaning, dressing and preserving fish, seafood and value-added products*

To be competent, the user/individual on the job must be able to:

- PC1.** carry out descaling by holding seafood firmly, and by using descaling knife or tool in the opposite direction of scale growth, from tail to head to scrape off the scales
- PC2.** Eviscerate the internal organs by making a little incision in its abdomen
- PC3.** ensure to clean well after evisceration to get rid of any last bits of organs
- PC4.** undertake head is either taken off, twisted off or chopped off with a knife, depending on the kind of seafood
- PC5.** perform gentle separation of skin and flesh with a sharp knife after which skin is scraped or pulled off
- PC6.** decorticate shell by hand with the use of specialized instruments, depending on the kind of seafood
- PC7.** preserve seafood quickly by rapidly reducing temperature (flash freezing) to retain texture, flavor, and nutritional value of seafood
- PC8.**
  - preserve seafood by an extremely quick freezing process that uses carbon dioxide or liquid nitrogen, depending on the type of seafood.
  - Type: whole fish, fillets, shellfish, crab, shrimp, etc.
  - Quick freezing process: Individually Quick Freezing (IQF), blast freezing, horizontal plate freezing, liquid immersion freezing, etc.
- PC9.** maintain equipment so that it always runs in the designated temperature range for quick freezing
- PC10.** overlook the feeding process while putting seafood onto equipment and ensure uniform distribution
- PC11.** regulate freezing temperatures to ensure necessary level is maintained during the process
- PC12.**
  - administer seafood is partially cooked to preserve product quality and flavour for canning for long period of time.
  - Seafood: Salmon, tuna, sardines, etc.

- PC13.** manage adding of seafood to cans, sealed and vacuum sealed during filling and sealing process
- PC14.** carry out heating of sealed cans to destroy any bacteria or enzymes
- PC15.**
  - immerse seafood in a saltwater solution (brine) before smoking.
  - Seafood: smoked salmon, mackerel, herring, etc.
- PC16.** perform cold smoking at reduced temperatures to enhance flavour and consistency without cooking it.
- PC17.** expose seafood to smoke from burning wood or other sources for distinct flavour and for preservation
- PC18.**
  - ensure to sprinkle or dip seafood in salt before drying for preservation for lengthy shelf life and concentrated flavor.
  - Seafood: dried fish, dried prawns, dried squids, etc.
- PC19.** administer regulated heat and airflow for sun drying, air drying or by using specialized tools for drying process
- PC20.** perform vacuum packing by using vacuum sealing machines to create impermeable packages for preserving seafood and slowing down spoilage. Seafood: fillets, cooked items, etc.

*Carry out export of fish, seafood and value-added products*

To be competent, the user/individual on the job must be able to:

- PC21.** verify that every seafood product complies with target nations' laws governing food safety and quality
- PC22.** assemble the invoices, shipping paperwork, and certificates of origin that are required for export
- PC23.** verify that items satisfy the end market's quality requirements by carrying out quality control inspections
- PC24.** keep seafood items at proper temperature by maintaining cold chain from processing to transportation
- PC25.** ensure packaging and labelling adhere to language and allergy labelling requirements as well as the restrictions of target market
- PC26.** ensure goods are handled carefully to avoid damage for transporting them either by air or sea
- PC27.** oversee the customs clearance procedures to ensure adherence to import laws of destination country
- PC28.** keep records and traceability systems up to date to trace origin and processing of marine items
- PC29.** preserve quality and safety of seafood by storing in a protective way till they are delivered to their ultimate consumers
- PC30.** adhere to the export laws and export control specifications of nations of origin and destination

*Oversee product packaging, labelling and quality control*

To be competent, the user/individual on the job must be able to:

- PC31.** place processed seafood in boxes, cans, or vacuum-sealed bags, among other packaging choices
- PC32.** detailing product details, such as ingredients, allergy alerts, and storage guidelines on packaging

- PC33.** conduct visual inspection by paying close attention to the shape, hue, and feel of processed seafood
- PC34.** assessing the items' flavour and overall taste by conducting taste testing
- PC35.** • perform texture assessment by determining desirable texture of seafood.  
• Texture: firm, crisp, or soft, etc.
- PC36.** ensure product quality and safety by monitoring product's temperature
- PC37.** ensure that items adhere to weight and portion size guidelines
- PC38.** perform package inspection by checking packaging is intact and suitable for product

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** organization standards, process standards and procedures followed in the organisation
- KU2.** types of products produced by the organisation
- KU3.** code of business conduct
- KU4.** dress code to be followed
- KU5.** job responsibilities/duties and standard operating procedures
- KU6.** internal processes such as procurement, store management, inventory management, quality management and key contact points for query resolution
- KU7.** provision of wages and working hours as per organisation policy
- KU8.** food safety and hygiene standards followed
- KU9.** different types of seafood, their characteristics, and how to handle and process them
- KU10.** various preservation methods, such as freezing, smoking, canning and drying and their applications
- KU11.** cooking methods like boiling, broiling, grilling, frying, baking, and steaming to prepare seafood products
- KU12.** types of machineries used for processing and machineries used in the organisation
- KU13.** handling all machineries
- KU14.** maintenance of machineries, equipment and tools
- KU15.** quality parameters, basic food microbiology and quality assessment based on physical parameters
- KU16.** types and category of packaging materials, packaging machineries
- KU17.** basic knowledge of refrigeration
- KU18.** cold storage facility and its maintenance
- KU19.** storage conditions for all varieties of fish and sea food
- KU20.** storage procedures for raw materials and processed food
- KU21.** cleaning procedures such as CIP and COP
- KU22.** knowledge of sanitizers and disinfectants and their handling and storing methods
- KU23.** food laws and regulations on product, packaging and labelling
- KU24.** food safety and hygiene
- KU25.** Good Manufacturing Practices
- KU26.** HACCP



- KU27.** how to create value-added products through processes like marinating, breading and extrusion
- KU28.** how different ingredients and seasonings can enhance flavour of seafood products
- KU29.** current market trends and consumer preferences to adapt product offerings
- KU30.** international trade laws, especially those pertaining to tariffs, trade agreements, and customs processes have an impact on the export of seafood goods
- KU31.** export documentation, including bills of lading, invoices, certificates of origin, and certifications of adherence to food safety regulations
- KU32.** needs and standards for quality that the target markets have, including laws governing product specifications and labelling
- KU33.** the ability to keep seafood goods at the proper temperature and quality while in transit by managing the cold chain
- KU34.** unique needs of each customer, such as preferred packaging, labelling specifications, and delivery dates

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** note the information communicated by the supervisor
- GS2.** note the raw materials used for production and the finished products produced
- GS3.** note the readings of the process parameters and provide necessary information to fill the process chart
- GS4.** note down observations (if any) related to the process
- GS5.** write information documents to internal departments/ internal teams
- GS6.** note down the data for ERP or as required by the organization
- GS7.** read and interpret the process required for producing various types of products
- GS8.** read and interpret the process flowchart for all products produced
- GS9.** read equipment manuals and process documents to understand the equipment operation and process requirement
- GS10.** read internal information documents sent by internal teams
- GS11.** discuss task lists, schedules and activities with the supervisor
- GS12.** effectively communicate with team members
- GS13.** question the supervisor in order to understand the nature of the problem and to clarify queries
- GS14.** attentively listen and comprehend the information given by the speaker
- GS15.** communicate clearly with the supervisor and cross department teams on the issues faced during the process
- GS16.** analyse critical points in day-to-day tasks through experience and observation and identify control measures to solve the issue
- GS17.** handle issues in case the supervisor is not available (as per the authority matrix defined by the organization)
- GS18.** plan and organize the work order and jobs received from the supervisor
- GS19.** organize raw materials and packaging materials required for all products following the instruction provided by the supervisor

- GS20.** plan and prioritize work based on instructions received from the supervisor
- GS21.** plan to utilise time and equipment's effectively
- GS22.** organize all process/ equipment manuals so as to access information easily
- GS23.** support the supervisor in scheduling tasks for helper(s)
- GS24.** understand customer requirements and their priority and respond as per their needs
- GS25.** support supervisor in solving problems by detailing out problems
- GS26.** discuss the possible solutions with the supervisor for problem-solving
- GS27.** apply domain information about maintenance processes and technical knowledge about tools and equipment
- GS28.** use common sense and make judgments on day-to-day basis
- GS29.** use reasoning skills to identify and resolve basic problems
- GS30.** use intuition to detect any potential problems which could arise during operations
- GS31.** use acquired knowledge of the process for identifying and handling issues

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform cleaning, dressing and preserving fish, seafood and value-added products</i>	<b>11.5</b>	<b>20</b>	-	<b>20</b>
<b>PC1.</b> carry out descaling by holding seafood firmly, and by using descaling knife or tool in the opposite direction of scale growth, from tail to head to scrape off the scales	0.5	1	-	1
<b>PC2.</b> Eviscerate the internal organs by making a little incision in its abdomen	0.5	1	-	1
<b>PC3.</b> ensure to clean well after evisceration to get rid of any last bits of organs	0.5	1	-	1
<b>PC4.</b> undertake head is either taken off, twisted off or chopped off with a knife, depending on the kind of seafood	0.5	1	-	1
<b>PC5.</b> perform gentle separation of skin and flesh with a sharp knife after which skin is scraped or pulled off	0.5	1	-	1
<b>PC6.</b> decorticate shell by hand with the use of specialized instruments, depending on the kind of seafood	1	1	-	1
<b>PC7.</b> preserve seafood quickly by rapidly reducing temperature (flash freezing) to retain texture, flavor, and nutritional value of seafood	0.5	1	-	1
<b>PC8.</b> <ul style="list-style-type: none"> <li>• preserve seafood by an extremely quick freezing process that uses carbon dioxide or liquid nitrogen, depending on the type of seafood.</li> <li>• Type: whole fish, fillets, shellfish, crab, shrimp, etc.</li> <li>• Quick freezing process: Individually Quick Freezing (IQF), blast freezing, horizontal plate freezing, liquid immersion freezing, etc.</li> </ul>	1	1	-	1
<b>PC9.</b> maintain equipment so that it always runs in the designated temperature range for quick freezing	0.5	1	-	1
<b>PC10.</b> overlook the feeding process while putting seafood onto equipment and ensure uniform distribution	0.5	1	-	1

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> regulate freezing temperatures to ensure necessary level is maintained during the process	0.5	1	-	1
<b>PC12.</b> <ul style="list-style-type: none"> <li>administer seafood is partially cooked to preserve product quality and flavour for canning for long period of time.</li> <li>Seafood: Salmon, tuna, sardines, etc.</li> </ul>	0.5	1	-	1
<b>PC13.</b> manage adding of seafood to cans, sealed and vacuum sealed during filling and sealing process	0.5	1	-	1
<b>PC14.</b> carry out heating of sealed cans to destroy any bacteria or enzymes	0.5	1	-	1
<b>PC15.</b> <ul style="list-style-type: none"> <li>immerse seafood in a saltwater solution (brine) before smoking.</li> <li>Seafood: smoked salmon, mackerel, herring, etc.</li> </ul>	0.5	1	-	1
<b>PC16.</b> perform cold smoking at reduced temperatures to enhance flavour and consistency without cooking it.	0.5	1	-	1
<b>PC17.</b> expose seafood to smoke from burning wood or other sources for distinct flavour and for preservation	0.5	1	-	1
<b>PC18.</b> <ul style="list-style-type: none"> <li>ensure to sprinkle or dip seafood in salt before drying for preservation for lengthy shelf life and concentrated flavor.</li> <li>Seafood: dried fish, dried prawns, dried squids, etc.</li> </ul>	1	1	-	1
<b>PC19.</b> administer regulated heat and airflow for sun drying, air drying or by using specialized tools for drying process	0.5	1	-	1
<b>PC20.</b> perform vacuum packing by using vacuum sealing machines to create impermeable packages for preserving seafood and slowing down spoilage. Seafood: fillets, cooked items, etc.	0.5	1	-	1
<i>Carry out export of fish, seafood and value-added products</i>	<b>7</b>	<b>10</b>	-	<b>10</b>
<b>PC21.</b> verify that every seafood product complies with target nations' laws governing food safety and quality	1	1	-	1

<b>Assessment Criteria for Outcomes</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>
<b>PC22.</b> assemble the invoices, shipping paperwork, and certificates of origin that are required for export	0.5	1	-	1
<b>PC23.</b> verify that items satisfy the end market's quality requirements by carrying out quality control inspections	1	1	-	1
<b>PC24.</b> keep seafood items at proper temperature by maintaining cold chain from processing to transportation	0.5	1	-	1
<b>PC25.</b> ensure packaging and labelling adhere to language and allergy labelling requirements as well as the restrictions of target market	1	1	-	1
<b>PC26.</b> ensure goods are handled carefully to avoid damage for transporting them either by air or sea	0.5	1	-	1
<b>PC27.</b> oversee the customs clearance procedures to ensure adherence to import laws of destination country	1	1	-	1
<b>PC28.</b> keep records and traceability systems up to date to trace origin and processing of marine items	0.5	1	-	1
<b>PC29.</b> preserve quality and safety of seafood by storing in a protective way till they are delivered to their ultimate consumers	0.5	1	-	1
<b>PC30.</b> adhere to the export laws and export control specifications of nations of origin and destination	0.5	1	-	1
<i>Oversee product packaging, labelling and quality control</i>	<b>5.5</b>	<b>8</b>	-	<b>8</b>
<b>PC31.</b> place processed seafood in boxes, cans, or vacuum-sealed bags, among other packaging choices	0.5	1	-	1
<b>PC32.</b> detailing product details, such as ingredients, allergy alerts, and storage guidelines on packaging	1	1	-	1
<b>PC33.</b> conduct visual inspection by paying close attention to the shape, hue, and feel of processed seafood	0.5	1	-	1

<b>Assessment Criteria for Outcomes</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>
<b>PC34.</b> assessing the items' flavour and overall taste by conducting taste testing	1	1	-	1
<b>PC35.</b> <ul style="list-style-type: none"> <li>• perform texture assessment by determining desirable texture of seafood.</li> <li>• Texture: firm, crisp, or soft, etc.</li> </ul>	0.5	1	-	1
<b>PC36.</b> ensure product quality and safety by monitoring product's temperature	0.5	1	-	1
<b>PC37.</b> ensure that items adhere to weight and portion size guidelines	1	1	-	1
<b>PC38.</b> perform package inspection by checking packaging is intact and suitable for product	0.5	1	-	1
<b>NOS Total</b>	<b>24</b>	<b>38</b>	<b>-</b>	<b>38</b>

**National Occupational Standards (NOS) Parameters**

<b>NOS Code</b>	FIC/N4006
<b>NOS Name</b>	Implementing the processing of fish, seafood and value-added products
<b>Sector</b>	Food Processing
<b>Sub-Sector</b>	Fish and Sea Food
<b>Occupation</b>	Processing-Fish and Seafood
<b>NSQF Level</b>	3.5
<b>Credits</b>	3
<b>Version</b>	1.0
<b>Next Review Date</b>	NA

## FIC/N9906: Apply food safety guidelines in Food Processing

### Description

This unit covers the essential components of food safety, Good Manufacturing Practices (GMP), and personal hygiene in the food industry. It emphasizes the importance of individuals working in the food industry in protecting the health and well-being of consumers by following food safety protocols and procedures and ensuring the production of safe and high-quality food products.

### Scope

The scope covers the following :

- Apply personal hygiene and follow Good Manufacturing practices at the workplace.
- Implement Food Safety and pre-requisite programs (PRP) at the workplace.

### Elements and Performance Criteria

*Apply personal hygiene and follow Good Manufacturing practices at workplace*

To be competent, the user/individual on the job must be able to:

- PC1.** PC1. follow a site relevant documented procedure for Personal Hygiene and Visitor/ Contractor rules.
- PC2.** PC2. follow work instructions at levels of employees inside a food manufacturing site and ensure that the relevant instructions are well communicated and being followed at the fixed timelines.
- PC3.** PC3. ensure timely participate and carry out the relevant training and awareness sessions on personal hygiene, GMP, and related topics.
- PC4.** PC4. ensure timely medical examination from a prescribed and authorized doctor and comply with the guidelines of Schedule IV as described in Food Safety Standard Authority of India (FSSAI) guidelines.
- PC5.** PC5. fill in data in the daily monitoring checklist related to personal hygiene, food safety, and GMP.
- PC6.**
  - PC6. follow a site-relevant documented procedure and area-wise work instructions for Good Manufacturing Practices (GMP) to be followed on the site.
  - procedure: Hand washing requirements, Gowning & De gowning protocols, cleaning, and sanitation of employee lockers, follow the protocols as laid down in the different categories of processing areas like Low Risk, High Risk, High Care areas, etc.
- PC7.** PC7. follow all validated Do's & Don'ts inside a food manufacturing firm.
- PC8.** PC8. follow man and materials movement throughout the production facility, to restrict unwanted hazards to cross-contaminate the products which are being manufactured in the facility.
- PC9.** PC9. refer to the process flow charts, HACCP summary plan, and critical process parameters in each and respective areas of the production line.
- PC10.** PC10. identify the material requirements such as manufacturing equipments, Utensils, and other processing aids, cleaning chemicals, and cleaning work instructions in all the relevant areas of the manufacturing facility. Also, a special focus shall be given to Allergens and their risks. Wherever required, the allergen requirements shall be separately addressed.



- PC11.** PC11. ensure to properly tag and number all the equipment, machinery, tools, and other processing aids to keep proper traceability of the product being manufactured and handled at the site.
- PC12.** PC12. follow and implement all training and awareness guidelines in the manufacturing area and regularly participate in training effectiveness for evaluation.
- PC13.** PC13. participate in audits and address the aspects of Good Manufacturing Procedures, personal hygiene, and food safety.
- PC14.** PC14. ensure the record keeping and documentation such as Daily Monitoring Sheets, Batch Traceability Records, machine records, product parameters, process control parameters, etc.

*Implement food safety practices at the workplace*

To be competent, the user/individual on the job must be able to:

- PC15.** PC15. maintain updated facilities, equipment, and tool and design requirements to minimize the risks associated with the products being handled at the site.
- PC16.** PC16. follow the instruction in the raw and packaging materials warehouse and ensure receiving material parameters match all the laid requirements. parameters: Incoming vehicles Visual report, storage, and handling requirements, hazardous and non-hazardous goods, allergens, cross-contamination risks, Quarantine, Accepted & rejected goods, monitoring temperature and humidity, etc.
- PC17.** PC17. follow FSSAI Schedule IV requirements related to Pest Control, Cleaning, and Sanitation, Utilities, Waste Disposal, Prevention of Cross-Contamination, allergen management, corrective action, preventive actions, food operation control etc.
- PC18.** PC18. ensure timely check of the critical control points and product parameters.
- PC19.** PC19. record keeping and documentation such as daily monitoring sheets, cleaning sheets, parameters, etc.
- PC20.** PC20. report any food safety and GMP issue to the supervisor, if any.

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** importance of personal hygiene, GMP, visitors & contractor's rules. Associated risk in case of deviation from the standard policies and how the requirement is linked with the site's FSSAI License.
- KU2.** KU2. importance of training and work instruction delivered by the supervisors.
- KU3.** KU3. importance of filling the records and checklists, formats and how to ensure that the timely and effective completion is achieved.
- KU4.** KU4. knowledge of trainings and skills required to perform in food processing premises.
- KU5.** KU5. understand FSSAI Schedule IV requirements of food handlers and PRPs within the processing area
- KU6.** KU6. importance of timely medical examinations and awareness of communicable diseases
- KU7.** Understanding of Do's & Don'ts, intellect mindset to understand the visual illustrations
- KU8.** KU8. understanding about Site Zoning plans.
- KU9.** KU9. awareness of layout which would help to demarcate the defined movements of RM, PM, FG, and wastes generated during the processing of goods. This one lays a framework to launch Good Manufacturing Practices (GMP) successfully and effectively on site.

- KU10.** KU10. understand the manufacturing process, product parameters and process control parameters such as CCPs
- KU11.** KU11. understanding about Hazard Analysis and Critical Control Points (HACCP)
- KU12.** KU12. understanding about Allergens and their types and controls to monitor effective handling of allergen raw materials on site.
- KU13.** KU13. basic understanding of traceability and mock recall
- KU14.** KU14. awareness about Internal & external Audits
- KU15.** KU15. understanding for RCA CAPA, cleaning and sanitation
- KU16.** KU16. awareness about record keeping and data monitoring in various sheets as per organizational requirement

### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** GS1. read and comprehend basic content to read labels, charts, signages, symbols and product manuals
- GS2.** GS2. communicate with coworkers appropriately to clarify instructions and other issues
- GS3.** GS3. plan and organize the work schedule, work area, tools, equipment, and materials for improved productivity
- GS4.** GS4. plan and prioritize tasks as per work requirements
- GS5.** GS5. always be punctual and courteous
- GS6.** GS6. good observations and intellect mindset

**Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Apply personal hygiene and follow Good Manufacturing practices at workplace</i>	<b>22</b>	<b>44</b>	-	<b>6</b>
<b>PC1.</b> PC1. follow a site relevant documented procedure for Personal Hygiene and Visitor/ Contractor rules.	2	4	-	-
<b>PC2.</b> PC2. follow work instructions at levels of employees inside a food manufacturing site and ensure that the relevant instructions are well communicated and being followed at the fixed timelines.	2	4	-	2
<b>PC3.</b> PC3. ensure timely participate and carry out the relevant training and awareness sessions on personal hygiene, GMP, and related topics.	2	4	-	-
<b>PC4.</b> PC4. ensure timely medical examination from a prescribed and authorized doctor and comply with the guidelines of Schedule IV as described in Food Safety Standard Authority of India (FSSAI) guidelines.	2	4	-	-
<b>PC5.</b> PC5. fill in data in the daily monitoring checklist related to personal hygiene, food safety, and GMP.	2	4	-	-
<b>PC6.</b> <ul style="list-style-type: none"> <li>• PC6. follow a site-relevant documented procedure and area-wise work instructions for Good Manufacturing Practices (GMP) to be followed on the site.</li> <li>• procedure: Hand washing requirements, Gowning &amp; De gowning protocols, cleaning, and sanitation of employee lockers, follow the protocols as laid down in the different categories of processing areas like Low Risk, High Risk, High Care areas, etc.</li> </ul>	2	4	-	2
<b>PC7.</b> PC7. follow all validated Do's & Don'ts inside a food manufacturing firm.	1	2	-	1
<b>PC8.</b> PC8. follow man and materials movement throughout the production facility, to restrict unwanted hazards to cross-contaminate the products which are being manufactured in the facility.	2	4	-	-
<b>PC9.</b> PC9. refer to the process flow charts, HACCP summary plan, and critical process parameters in each and respective areas of the production line.	1	2	-	1

<b>Assessment Criteria for Outcomes</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>
<b>PC10.</b> PC10. identify the material requirements such as manufacturing equipments, Utensils, and other processing aids, cleaning chemicals, and cleaning work instructions in all the relevant areas of the manufacturing facility. Also, a special focus shall be given to Allergens and their risks. Wherever required, the allergen requirements shall be separately addressed.	2	4	-	-
<b>PC11.</b> PC11. ensure to properly tag and number all the equipment, machinery, tools, and other processing aids to keep proper traceability of the product being manufactured and handled at the site.	1	2	-	-
<b>PC12.</b> PC12. follow and implement all training and awareness guidelines in the manufacturing area and regularly participate in training effectiveness for evaluation.	1	2	-	-
<b>PC13.</b> PC13. participate in audits and address the aspects of Good Manufacturing Procedures, personal hygiene, and food safety.	1	2	-	-
<b>PC14.</b> PC14. ensure the record keeping and documentation such as Daily Monitoring Sheets, Batch Traceability Records, machine records, product parameters, process control parameters, etc.	1	2	-	-
<i>Implement food safety practices at the workplace</i>	<b>8</b>	<b>16</b>	-	<b>4</b>
<b>PC15.</b> PC15. maintain updated facilities, equipment, and tool and design requirements to minimize the risks associated with the products being handled at the site.	2	4	-	-
<b>PC16.</b> PC16. follow the instruction in the raw and packaging materials warehouse and ensure receiving material parameters match all the laid requirements. parameters: Incoming vehicles Visual report, storage, and handling requirements, hazardous and non-hazardous goods, allergens, cross-contamination risks, Quarantine, Accepted & rejected goods, monitoring temperature and humidity, etc.	1	2	-	1
<b>PC17.</b> PC17. follow FSSAI Schedule IV requirements related to Pest Control, Cleaning, and Sanitation, Utilities, Waste Disposal, Prevention of Cross-Contamination, allergen management, corrective action, preventive actions, food operation control etc.	2	4	-	2

<b>Assessment Criteria for Outcomes</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>
<b>PC18.</b> PC18. ensure timely check of the critical control points and product parameters.	1	2	-	-
<b>PC19.</b> PC19. record keeping and documentation such as daily monitoring sheets, cleaning sheets, parameters, etc.	1	2	-	1
<b>PC20.</b> PC20. report any food safety and GMP issue to the supervisor, if any.	1	2	-	-
<b>NOS Total</b>	<b>30</b>	<b>60</b>	<b>-</b>	<b>10</b>

**National Occupational Standards (NOS) Parameters**

<b>NOS Code</b>	FIC/N9906
<b>NOS Name</b>	Apply food safety guidelines in Food Processing
<b>Sector</b>	Food Processing
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	3
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	23/06/2026
<b>NSQ Clearance Date</b>	23/06/2023

## DGT/VSQ/N0101: Employability Skills (30 Hours)

### Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

### Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

### Elements and Performance Criteria

#### *Introduction to Employability Skills*

To be competent, the user/individual on the job must be able to:

**PC1.** understand the significance of employability skills in meeting the job requirements

#### *Constitutional values - Citizenship*

To be competent, the user/individual on the job must be able to:

**PC2.** identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices

#### *Becoming a Professional in the 21st Century*

To be competent, the user/individual on the job must be able to:

**PC3.** explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.

#### *Basic English Skills*

To be competent, the user/individual on the job must be able to:

**PC4.** speak with others using some basic English phrases or sentences

#### *Communication Skills*

To be competent, the user/individual on the job must be able to:

**PC5.** follow good manners while communicating with others

**PC6.** work with others in a team

#### *Diversity & Inclusion*

To be competent, the user/individual on the job must be able to:

**PC7.** communicate and behave appropriately with all genders and PwD

**PC8.** report any issues related to sexual harassment

*Financial and Legal Literacy*

To be competent, the user/individual on the job must be able to:

**PC9.** use various financial products and services safely and securely

**PC10.** calculate income, expenses, savings etc.

**PC11.** approach the concerned authorities for any exploitation as per legal rights and laws

*Essential Digital Skills*

To be competent, the user/individual on the job must be able to:

**PC12.** operate digital devices and use its features and applications securely and safely

**PC13.** use internet and social media platforms securely and safely

*Entrepreneurship*

To be competent, the user/individual on the job must be able to:

**PC14.** identify and assess opportunities for potential business

**PC15.** identify sources for arranging money and associated financial and legal challenges

*Customer Service*

To be competent, the user/individual on the job must be able to:

**PC16.** identify different types of customers

**PC17.** identify customer needs and address them appropriately

**PC18.** follow appropriate hygiene and grooming standards

*Getting ready for apprenticeship & Jobs*

To be competent, the user/individual on the job must be able to:

**PC19.** create a basic biodata

**PC20.** search for suitable jobs and apply

**PC21.** identify and register apprenticeship opportunities as per requirement

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

**KU1.** need for employability skills

**KU2.** various constitutional and personal values

**KU3.** different environmentally sustainable practices and their importance

**KU4.** Twenty first (21st) century skills and their importance

**KU5.** how to use basic spoken English language

**KU6.** Do and dont of effective communication

**KU7.** inclusivity and its importance

**KU8.** different types of disabilities and appropriate communication and behaviour towards PwD

**KU9.** different types of financial products and services

**KU10.** how to compute income and expenses

**KU11.** importance of maintaining safety and security in financial transactions



- KU12.** different legal rights and laws
- KU13.** how to operate digital devices and applications safely and securely
- KU14.** ways to identify business opportunities
- KU15.** types of customers and their needs
- KU16.** how to apply for a job and prepare for an interview
- KU17.** apprenticeship scheme and the process of registering on apprenticeship portal

### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** communicate effectively using appropriate language
- GS2.** behave politely and appropriately with all
- GS3.** perform basic calculations
- GS4.** solve problems effectively
- GS5.** be careful and attentive at work
- GS6.** use time effectively
- GS7.** maintain hygiene and sanitisation to avoid infection

**Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	<b>1</b>	<b>1</b>	-	-
<b>PC1.</b> understand the significance of employability skills in meeting the job requirements	-	-	-	-
<i>Constitutional values - Citizenship</i>	<b>1</b>	<b>1</b>	-	-
<b>PC2.</b> identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	<b>1</b>	<b>3</b>	-	-
<b>PC3.</b> explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
<i>Basic English Skills</i>	<b>2</b>	<b>3</b>	-	-
<b>PC4.</b> speak with others using some basic English phrases or sentences	-	-	-	-
<i>Communication Skills</i>	<b>1</b>	<b>1</b>	-	-
<b>PC5.</b> follow good manners while communicating with others	-	-	-	-
<b>PC6.</b> work with others in a team	-	-	-	-
<i>Diversity &amp; Inclusion</i>	<b>1</b>	<b>1</b>	-	-
<b>PC7.</b> communicate and behave appropriately with all genders and PwD	-	-	-	-
<b>PC8.</b> report any issues related to sexual harassment	-	-	-	-
<i>Financial and Legal Literacy</i>	<b>3</b>	<b>4</b>	-	-
<b>PC9.</b> use various financial products and services safely and securely	-	-	-	-
<b>PC10.</b> calculate income, expenses, savings etc.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
<i>Essential Digital Skills</i>	<b>4</b>	<b>6</b>	-	-
<b>PC12.</b> operate digital devices and use its features and applications securely and safely	-	-	-	-
<b>PC13.</b> use internet and social media platforms securely and safely	-	-	-	-
<i>Entrepreneurship</i>	<b>3</b>	<b>5</b>	-	-
<b>PC14.</b> identify and assess opportunities for potential business	-	-	-	-
<b>PC15.</b> identify sources for arranging money and associated financial and legal challenges	-	-	-	-
<i>Customer Service</i>	<b>2</b>	<b>2</b>	-	-
<b>PC16.</b> identify different types of customers	-	-	-	-
<b>PC17.</b> identify customer needs and address them appropriately	-	-	-	-
<b>PC18.</b> follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship &amp; Jobs</i>	<b>1</b>	<b>3</b>	-	-
<b>PC19.</b> create a basic biodata	-	-	-	-
<b>PC20.</b> search for suitable jobs and apply	-	-	-	-
<b>PC21.</b> identify and register apprenticeship opportunities as per requirement	-	-	-	-
<b>NOS Total</b>	<b>20</b>	<b>30</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	DGT/VSQ/N0101
<b>NOS Name</b>	Employability Skills (30 Hours)
<b>Sector</b>	Cross Sectoral
<b>Sub-Sector</b>	Professional Skills
<b>Occupation</b>	Employability
<b>NSQF Level</b>	2
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	31/01/2024
<b>Next Review Date</b>	31/01/2027
<b>NSQC Clearance Date</b>	31/01/2024

## FIC/N4007: Value added food products - mince-based products

### Description

This NOS unit is about carrying out activities for producing mince-based products as per the standards

### Scope

The scope covers the following :

- The scope covers the following:
- Perform development of mince-based products

### Elements and Performance Criteria

#### *Perform development of mince-based products*

To be competent, the user/individual on the job must be able to:

- PC1.** • select premium seafood which should be clean, fresh and adhere to all safety requirements.  
• Seafood: fish, prawns, crab, etc.
- PC2.** remove scales, shells, skin and other unwanted components to clean seafood
- PC3.** remove dirt and contaminants by rinsing seafood
- PC4.** • Mince cleaned seafood by using specialized tools.  
• Tools: mincers, grinders, etc.
- PC5.** ensure preferred mince consistency (fine/coarse) as per product specification
- PC6.** season minced seafood with seasonings, spices and flavourings to improve flavour and produce a distinctive product
- PC7.** mix components to achieve equitable dispersion
- PC8.** • blend binding substances to enhance texture and cohesion.  
• Substances: Flour, eggs or other binders
- PC9.** oversee binding components are evenly distributed within the mixture
- PC10.** prepare specific recipes and formulations for products indicating ingredient quantities and recommended processing times
- PC11.** administer appropriate looks, flavour, and texture of the product
- PC12.** • mold spice mince mixture into desired product forms.  
• Forms: patties, nuggets, sticks, etc
- PC13.** apply breading, batter, or coatings to product to give a crispy or crunchy surface, if coating is necessary
- PC14.** oversee product is uniformly coated and well-adhered
- PC15.** • cook or process mince-based items using different techniques.  
• Techniques: frying, baking, steaming, etc.
- PC16.** administer cooking time and temperature to get food cooked to the right doneness and safety
- PC17.** confirm cooling of cooked product to halt cooking process and prepare them for additional handling or packing
- PC18.** • verify quality control checks on the product.  
• Checks: Flavour, texture, appearance, safety, etc.

- PC19.** pack mince-based items in appropriate containers and packaging material
- PC20.** administer labelling requirement of the packaged items with all necessary information including allergens
- PC21.** keep final item in a temperature-controlled environment and at proper refrigeration levels to maintain quality and safety

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** varieties of seafood and its characteristics such as texture, flavour, and nutritional value
- KU2.** kind of seafood suitable for mince-based goods
- KU3.** laws governing food safety along with laws pertaining to handling and preparation of seafood
- KU4.** procedures for avoiding cross-contamination and guaranteeing product safety
- KU5.** maintenance, operation and use of mincing equipment
- KU6.** mincing methods to get accurate consistency and texture
- KU7.** binders, spices and flavorings used in mince-based goods
- KU8.** ability to season food to produce well-balanced and pleasant flavors
- KU9.** ability to create exact recipes and formulations while accounting for ingredient ratios and processing techniques
- KU10.** capacity to modify recipes to achieve desired product properties
- KU11.** numerous culinary and processing techniques such as, steaming, baking and frying
- KU12.** time-temperature parameters for safety and product quality
- KU13.** quality control procedures such as, visual inspection and sensory assessment
- KU14.** types of packaging material and techniques appropriate for frozen or chilled items
- KU15.** rules governing labelling including allergens and product information
- KU16.** how to update and maintain records of production, including batch numbers, production dates, and quality checks

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** focus on details while inspecting equipment and follow maintenance checklists
- GS2.** knowledge of documentation and record-keeping
- GS3.** analyze information and take appropriate actions
- GS4.** prioritize safety and adhering to safety protocols
- GS5.** note down the information communicated by the senior/supervisor, observations (if any) related to the process, as per applicability in the organization
- GS6.** read and interpret the work order from the supervisor, certificate of analysis, analysis report from internal lab, process required for producing various types of products, equipment manuals and process documents to understand the equipment operation and process requirement
- GS7.** communicate effectively with subordinates as well as supervisors

- GS8.** perform calculations related to quantities, parameters and measurements
- GS9.** collaborate and contribute to a positive and productive work environment
- GS10.** discuss task lists, schedules, and activities for carrying out production with the senior/supervisor
- GS11.** develop new product variations and improvements through a creative mindset
- GS12.** adjust to modifications in ingredients, equipment or processing techniques

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform development of mince-based products</i>	<b>26</b>	<b>52</b>	-	<b>22</b>
<b>PC1.</b> <ul style="list-style-type: none"> <li>select premium seafood which should be clean, fresh and adhere to all safety requirements.</li> <li>Seafood: fish, prawns, crab, etc.</li> </ul>	1	2	-	1
<b>PC2.</b> remove scales, shells, skin and other unwanted components to clean seafood	2	4	-	1
<b>PC3.</b> remove dirt and contaminants by rinsing seafood	1	2	-	1
<b>PC4.</b> <ul style="list-style-type: none"> <li>Mince cleaned seafood by using specialized tools.</li> <li>Tools: mincers, grinders, etc.</li> </ul>	2	4	-	1
<b>PC5.</b> ensure preferred mince consistency (fine/coarse) as per product specification	1	2	-	1
<b>PC6.</b> season minced seafood with seasonings, spices and flavourings to improve flavour and produce a distinctive product	1	2	-	1
<b>PC7.</b> mix components to achieve equitable dispersion	1	2	-	1
<b>PC8.</b> <ul style="list-style-type: none"> <li>blend binding substances to enhance texture and cohesion.</li> <li>Substances: Flour, eggs or other binders</li> </ul>	2	4	-	1
<b>PC9.</b> oversee binding components are evenly distributed within the mixture	1	2	-	1
<b>PC10.</b> prepare specific recipes and formulations for products indicating ingredient quantities and recommended processing times	1	2	-	1
<b>PC11.</b> administer appropriate looks, flavour, and texture of the product	1	2	-	1
<b>PC12.</b> <ul style="list-style-type: none"> <li>mold spice mince mixture into desired product forms.</li> <li>Forms: patties, nuggets, sticks, etc</li> </ul>	1	2	-	1



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> apply breading, batter, or coatings to product to give a crispy or crunchy surface, if coating is necessary	2	4	-	1
<b>PC14.</b> oversee product is uniformly coated and well-adhered	1	2	-	1
<b>PC15.</b> <ul style="list-style-type: none"> <li>• cook or process mince-based items using different techniques.</li> <li>• Techniques: frying, baking, steaming, etc.</li> </ul>	1	2	-	1
<b>PC16.</b> administer cooking time and temperature to get food cooked to the right doneness and safety	1	2	-	1
<b>PC17.</b> confirm cooling of cooked product to halt cooking process and prepare them for additional handling or packing	1	2	-	1
<b>PC18.</b> <ul style="list-style-type: none"> <li>• verify quality control checks on the product.</li> <li>• Checks: Flavour, texture, appearance, safety, etc.</li> </ul>	1	2	-	1
<b>PC19.</b> pack mince-based items in appropriate containers and packaging material	1	2	-	1
<b>PC20.</b> administer labelling requirement of the packaged items with all necessary information including allergens	1	2	-	1
<b>PC21.</b> keep final item in a temperature-controlled environment and at proper refrigeration levels to maintain quality and safety	2	4	-	2
<b>NOS Total</b>	<b>26</b>	<b>52</b>	<b>-</b>	<b>22</b>

**National Occupational Standards (NOS) Parameters**

<b>NOS Code</b>	FIC/N4007
<b>NOS Name</b>	Value added food products - mince-based products
<b>Sector</b>	Food Processing
<b>Sub-Sector</b>	Fish and Sea Food
<b>Occupation</b>	Processing-Fish and Seafood
<b>NSQF Level</b>	3.5
<b>Credits</b>	3
<b>Version</b>	1.0
<b>Next Review Date</b>	NA

## FIC/N4009: Value added food products - pickled products

### Description

This NOS unit is about carrying out activities for pickled products as per the standards.

### Scope

The scope covers the following :

- The scope covers the following
- conduct processing of pickled products

### Elements and Performance Criteria

#### *Conduct processing of pickled products*

To be competent, the user/individual on the job must be able to:

- PC1.** • select seafood that meets quality standards, ensuring it is fresh, defect free and safe for ingestion.  
• Quality standards: includes texture, scent, appearance, etc.
- PC2.** • gather necessary ingredients, measure amount of salt precisely on the basis of pickling formula.  
• Ingredients: seafood, salt, water, other spices or seasoning, etc
- PC3.** prepare brine solution by heating a portion of water in large container and monitor temperature by using a thermometer
- PC4.** administer adding gradually measured salt to hot water and continually stirring to completely dissolve the salt
- PC5.** coordinate to add any additional seasoning, spices or flavorings to brine solution while stirring to distribute them easily
- PC6.** oversee that brine solution is cooled to room temperature
- PC7.** • clean chosen seafood well, removing any unwanted pieces by following appropriate techniques.  
• Unwanted pieces: Scales, shells, skin, etc.
- PC8.** maintain consistency in size and look while following pickling procedure to cut or slice the cleaned seafood into even pieces or fillets
- PC9.** control water temperature in a saucepan to bring to a boil to thoroughly submerge seafood
- PC10.** position seafood in blanching basket or immerse it directly into boiling water for a few seconds or minutes (depending on the size and kind of seafood)
- PC11.** oversee seafood during blanching process for its partial readiness
- PC12.** transpose blanched seafood to icy water to halt cooking process and to maintain colour, texture and flavour of seafood
- PC13.** pull out seafood from icy water and drain or pat it with paper towels before further processing
- PC14.** • ensure to follow safety precautions during process.  
• Precautions: Right tools, be cautious around boiling water, etc.
- PC15.** decontaminate canning jars or other containers according to prescribed sterilization schedule and procedures

- PC16.** ensure there are no air holes and seafood are distributed equally before adding it to sterilized jars
- PC17.** decant prepared brine solution over tightly packed seafood with caution ensuring it covers seafood completely
- PC18.** eliminate any air bubbles within jar to remove any trapped air bubbles for prevent any spoilage and ensure proper sealing
- PC19.** set canning lids on jars correctly and tighten to achieve an airtight seal
- PC20.**
  - secure jars using an appropriate method to create a vacuum and prevent microbial growth.
  - Appropriate Method: hear or pressure sealing, etc.
- PC21.**
  - indicate product information and necessary regulatory information on each jar.
  - Product information: Date of processing, ingredient list, etc.

### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** food safety regulations and standards governing the processing and preservation of seafood products to ensure compliance
- KU2.** different seafood types, their characteristics, and handling requirements
- KU3.** various pickling methods including brine and vinegar pickling
- KU4.** how different ingredients, including salt, spices, and seasonings affect flavour, texture, and preservation of pickled products
- KU5.** principles of microbial control to prevent spoilage and ensure product safety
- KU6.** how much of the composition and concentration of brine solution is required
- KU7.** blanching techniques and their effect on texture and color of seafood during pickling process
- KU8.** packaging and sealing methods, including canning, vacuum sealing, and lid application
- KU9.** quality control measures including visual testing, taste testing and product evaluation

### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** adhere to safety protocols to prevent accidents and ensure safe working conditions
- GS2.** read operation manuals and process documents to understand the equipment operation and process requirement
- GS3.** communicate with others effectively
- GS4.** collaborate with team members to increase process efficiency
- GS5.** plan and prioritize tasks to maximize productivity
- GS6.** be punctual and courteous
- GS7.** efficiently manage time to adhere to the production schedule and meet deadline
- GS8.** follow safety standards for self and others
- GS9.** identify and resolve issues
- GS10.** meticulously plan to ensure that parameters are set accurately and consistently

**Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Conduct processing of pickled products</i>	<b>30</b>	<b>49</b>	-	<b>21</b>
<b>PC1.</b> <ul style="list-style-type: none"> <li>select seafood that meets quality standards, ensuring it is fresh, defect free and safe for ingestion.</li> <li>Quality standards: includes texture, scent, appearance, etc.</li> </ul>	2	4	-	1
<b>PC2.</b> <ul style="list-style-type: none"> <li>gather necessary ingredients, measure amount of salt precisely on the basis of pickling formula.</li> <li>Ingredients: seafood, salt, water, other spices or seasoning, etc</li> </ul>	1	1	-	1
<b>PC3.</b> prepare brine solution by heating a portion of water in large container and monitor temperature by using a thermometer	2	4	-	1
<b>PC4.</b> administer adding gradually measured salt to hot water and continually stirring to completely dissolve the salt	1	2	-	1
<b>PC5.</b> coordinate to add any additional seasoning, spices or flavorings to brine solution while stirring to distribute them easily	1	1	-	1
<b>PC6.</b> oversee that brine solution is cooled to room temperature	1	1	-	1
<b>PC7.</b> <ul style="list-style-type: none"> <li>clean chosen seafood well, removing any unwanted pieces by following appropriate techniques.</li> <li>Unwanted pieces: Scales, shells, skin, etc.</li> </ul>	2	4	-	1
<b>PC8.</b> maintain consistency in size and look while following pickling procedure to cut or slice the cleaned seafood into even pieces or fillets	2	4	-	1
<b>PC9.</b> control water temperature in a saucepan to bring to a boil to thoroughly submerge seafood	1	1	-	1
<b>PC10.</b> position seafood in blanching basket or immerse it directly into boiling water for a few seconds or minutes (depending on the size and kind of seafood)	2	4	-	1

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> oversee seafood during blanching process for its partial readiness	1	1	-	1
<b>PC12.</b> transpose blanched seafood to icy water to halt cooking process and to maintain colour, texture and flavour of seafood	1	1	-	1
<b>PC13.</b> pull out seafood from icy water and drain or pat it with paper towels before further processing	1	1	-	1
<b>PC14.</b> <ul style="list-style-type: none"> <li>ensure to follow safety precautions during process.</li> <li>Precautions: Right tools, be cautious around boiling water, etc.</li> </ul>	2	4	-	1
<b>PC15.</b> decontaminate canning jars or other containers according to prescribed sterilization schedule and procedures	1	1	-	1
<b>PC16.</b> ensure there are no air holes and seafood are distributed equally before adding it to sterilized jars	1	1	-	1
<b>PC17.</b> decant prepared brine solution over tightly packed seafood with caution ensuring it covers seafood completely	2	4	-	1
<b>PC18.</b> eliminate any air bubbles within jar to remove any trapped air bubbles for prevent any spoilage and ensure proper sealing	1	1	-	1
<b>PC19.</b> set canning lids on jars correctly and tighten to achieve an airtight seal	1	1	-	1
<b>PC20.</b> <ul style="list-style-type: none"> <li>secure jars using an appropriate method to create a vacuum and prevent microbial growth.</li> <li>Appropriate Method: hear or pressure sealing, etc.</li> </ul>	2	4	-	1
<b>PC21.</b> <ul style="list-style-type: none"> <li>indicate product information and necessary regulatory information on each jar.</li> <li>Product information: Date of processing, ingredient list, etc.</li> </ul>	2	4	-	1
<b>NOS Total</b>	<b>30</b>	<b>49</b>	<b>-</b>	<b>21</b>

**National Occupational Standards (NOS) Parameters**

<b>NOS Code</b>	FIC/N4009
<b>NOS Name</b>	Value added food products - pickled products
<b>Sector</b>	Food Processing
<b>Sub-Sector</b>	Fish and Sea Food
<b>Occupation</b>	Processing-Fish and Seafood
<b>NSQF Level</b>	3.5
<b>Credits</b>	3
<b>Version</b>	1.0
<b>Next Review Date</b>	NA

## **FIC/N4010: Value added food products - battered and breaded or coated products**

### **Description**

This OS unit is about overseeing the processing of battered and breaded or coated products

### **Scope**

The scope covers the following :

- The scope covers the following:
- Conduct processing of battered and breaded or coated products

### **Elements and Performance Criteria**

#### *Conduct processing of battered and breaded or coated products*

To be competent, the user/individual on the job must be able to:

- PC1.** prepare batter or coating mixture as per recipe instructions and ensure precise measurements
- PC2.** clean and cut seafood into desired shapes or sizes as per recipe specifications
- PC3.** prepare workstation with separate places for handling coated and raw items to avoid cross-contamination
- PC4.** coat seafood pieces in dry flour or other dry materials to create an initial layer for better hold
- PC5.** submerge gently and evenly floured seafood in wet batter mixture
- PC6.** coat seafood with breadcrumbs, panko, or other chosen coatings to create a textured and crispy surface
- PC7.** smear any additional layers of coating for improved texture and flavour as specified in the recipe
- PC8.** ensure to heat cooking oil to proper temperature for deep frying
- PC9.** drop carefully breaded or battered seafood into heated oil ensuring they are not crammed together
- PC10.** cook seafood in a skillet or oven until it is crisp and cooked throughout
- PC11.** check temperature of oil to ensure uniformity during frying and adjust as necessary
- PC12.** drain excess oil from cooked item to get satisfactory texture
- PC13.** package fried or battered seafood to retain crispness and integrity
- PC14.** label packages with product information, including ingredient lists, allergens, and cooking instructions

### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** food safety regulations and standards governing processing of seafood products to ensure compliance



- KU2.** different types of seafood types, their characteristics, and handling requirements to choose suitable options for coating and cooking
- KU3.** different ingredients, including flours, batters, coatings, and spices, affect the texture, flavor, and appearance of coated seafood products
- KU4.** various coating techniques, such as flouring, battering, and breading, and their impact on product texture and flavor
- KU5.** varied cooking methods, including deep frying and baking
- KU6.** cooking oil management, including temperature control, oil filtration, and safe disposal
- KU7.** quality control measures, including visual inspection, taste testing, and product evaluation to maintain consistent product quality

### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** read and interpret policies and process manuals
- GS2.** communicate with others effectively
- GS3.** collaborate with team members to increase process efficiency
- GS4.** plan and prioritize tasks to maximize productivity
- GS5.** be punctual and courteous
- GS6.** adhere to the production schedule and meet a deadline
- GS7.** follow safety standards for self and others
- GS8.** read operation manuals and process documents to understand the equipment operation and process requirement

**Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Conduct processing of battered and breaded or coated products</i>	<b>30</b>	<b>56</b>	-	<b>14</b>
<b>PC1.</b> prepare batter or coating mixture as per recipe instructions and ensure precise measurements	2	4	-	1
<b>PC2.</b> clean and cut seafood into desired shapes or sizes as per recipe specifications	2	4	-	1
<b>PC3.</b> prepare workstation with separate places for handling coated and raw items to avoid cross-contamination	2	4	-	1
<b>PC4.</b> coat seafood pieces in dry flour or other dry materials to create an initial layer for better hold	2	4	-	1
<b>PC5.</b> submerge gently and evenly floured seafood in wet batter mixture	3	4	-	1
<b>PC6.</b> coat seafood with breadcrumbs, panko, or other chosen coatings to create a textured and crispy surface	2	4	-	1
<b>PC7.</b> smear any additional layers of coating for improved texture and flavour as specified in the recipe	2	4	-	1
<b>PC8.</b> ensure to heat cooking oil to proper temperature for deep frying	2	4	-	1
<b>PC9.</b> drop carefully breaded or battered seafood into heated oil ensuring they are not crammed together	2	4	-	1
<b>PC10.</b> cook seafood in a skillet or oven until it is crisp and cooked throughout	2	4	-	1
<b>PC11.</b> check temperature of oil to ensure uniformity during frying and adjust as necessary	3	4	-	1
<b>PC12.</b> drain excess oil from cooked item to get satisfactory texture	2	4	-	1
<b>PC13.</b> package fried or battered seafood to retain crispness and integrity	2	4	-	1

<b>Assessment Criteria for Outcomes</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>
<b>PC14.</b> label packages with product information, including ingredient lists, allergens, and cooking instructions	2	4	-	1
<b>NOS Total</b>	<b>30</b>	<b>56</b>	-	<b>14</b>

**National Occupational Standards (NOS) Parameters**

<b>NOS Code</b>	FIC/N4010
<b>NOS Name</b>	Value added food products - battered and breaded or coated products
<b>Sector</b>	Food Processing
<b>Sub-Sector</b>	Fish and Sea Food
<b>Occupation</b>	Processing-Fish and Seafood
<b>NSQF Level</b>	3.5
<b>Credits</b>	3
<b>Version</b>	1.0
<b>Next Review Date</b>	NA

## **FIC/N4011: Value added food products - intermediate moisture products**

### **Description**

This OS unit is about the processing of intermediate moisture products as per the standards

### **Scope**

The scope covers the following :

- The scope covers the following:
- Processing of intermediate moisture products (IMP)

### **Elements and Performance Criteria**

#### *Processing of intermediate moisture products (IMP)*

To be competent, the user/individual on the job must be able to:

- PC1.** select high-quality seafood, clean and remove undesirable parts
- PC2.**
  - prepare brine or marinade solution, making sure it has right amount of components.
  - Components: water, salt, sugar, seasonings, vinegar, citric acid, etc.
- PC3.** submerge cleaned and prepared seafood in brine or marinade solution
- PC4.** oversee marinating time to ensure product should not be too marinated or under-marinated to avoid dryness
- PC5.** administer temperature range for marinating process to prevent microbial growth and maintain product safety
- PC6.**
  - place drying apparatus to preserve proper humidity and temperature.
  - Apparatus: drying racks, dehydrators, ovens, etc.
- PC7.** administer even drying by placing seafood pieces on drying racks or trays at proper distances
- PC8.** adjust humidity and temperature as required during drying process to achieve desired moisture content
- PC9.** keep record of drying period and settings to ensure quality control and traceability
- PC10.** verify dried seafood item's visual quality to ensure specified requirements are met.  
Requirements: color, texture, appearance, etc.
- PC11.** conduct test on items moisture content level to ensure they have attained desired levels
- PC12.** perform tasting test to make sure they have appropriate flavour profile
- PC13.** verify product is packaged and sealed properly to retain its integrity

### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** principles and techniques involved in processing seafood to achieve intermediate moisture levels, including marinating and drying
- KU2.** food safety regulations and standards governing seafood products to ensure compliance with safety and hygiene requirements

- KU3.** different seafood types, their characteristics, and handling requirements
- KU4.** function and impact of ingredients in marinating solutions, including salt, sugar, seasonings, and acid components
- KU5.** factors affecting moisture content in seafood, including role of marinating and drying process
- KU6.** various drying techniques and equipment used for achieving intermediate moisture levels in seafood
- KU7.** quality control measures, including visual inspections, moisture content testing, and product evaluation to maintain consistent product quality

### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** read and interpret policies and process manuals
- GS2.** communicate with others effectively
- GS3.** collaborate with team members to increase process efficiency
- GS4.** plan and prioritize tasks to maximize productivity
- GS5.** be punctual and courteous
- GS6.** adhere to the production schedule and meet deadline
- GS7.** follow safety standards for self and others
- GS8.** read operation manuals and process documents to understand the equipment operation and process requirement

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Processing of intermediate moisture products (IMP)</i>	<b>31</b>	<b>56</b>	-	<b>13</b>
<b>PC1.</b> select high-quality seafood, clean and remove undesirable parts	2	4	-	1
<b>PC2.</b> <ul style="list-style-type: none"> <li>• prepare brine or marinade solution, making sure it has right amount of components.</li> <li>• Components: water, salt, sugar, seasonings, vinegar, citric acid, etc.</li> </ul>	3	4	-	1
<b>PC3.</b> submerge cleaned and prepared seafood in brine or marinade solution	2	4	-	1
<b>PC4.</b> oversee marinating time to ensure product should not be too marinated or under-marinated to avoid dryness	2	4	-	1
<b>PC5.</b> administer temperature range for marinating process to prevent microbial growth and maintain product safety	2	4	-	1
<b>PC6.</b> <ul style="list-style-type: none"> <li>• place drying apparatus to preserve proper humidity and temperature.</li> <li>• Apparatus: drying racks, dehydrators, ovens, etc.</li> </ul>	3	5	-	1
<b>PC7.</b> administer even drying by placing seafood pieces on drying racks or trays at proper distances	2	4	-	1
<b>PC8.</b> adjust humidity and temperature as required during drying process to achieve desired moisture content	2	4	-	1
<b>PC9.</b> keep record of drying period and settings to ensure quality control and traceability	2	4	-	1
<b>PC10.</b> verify dried seafood item's visual quality to ensure specified requirements are met. Requirements: color, texture, appearance, etc.	3	5	-	1
<b>PC11.</b> conduct test on items moisture content level to ensure they have attained desired levels	3	5	-	1
<b>PC12.</b> perform tasting test to make sure they have appropriate flavour profile	2	4	-	1

<b>Assessment Criteria for Outcomes</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>
<b>PC13.</b> verify product is packaged and sealed properly to retain its integrity	3	5	-	1
<b>NOS Total</b>	<b>31</b>	<b>56</b>	-	<b>13</b>



## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FIC/N4011
<b>NOS Name</b>	Value added food products - intermediate moisture products
<b>Sector</b>	Food Processing
<b>Sub-Sector</b>	Fish and Sea Food
<b>Occupation</b>	Processing-Fish and Seafood
<b>NSQF Level</b>	3.5
<b>Credits</b>	3
<b>Version</b>	1.0
<b>Next Review Date</b>	NA

## FIC/N4008: Value added food products - extruded products

### Description

The scope covers the following: This NOS unit is about carrying out activities for processing extruded products as per the standards.

### Scope

The scope covers the following :

- The scope covers the following:
- Perform processing of extruded products

### Elements and Performance Criteria

#### *Perform processing of extruded products*

To be competent, the user/individual on the job must be able to:

- PC1.** prepare recipes and formulations specifying ingredient quantities, processing instructions and considering factors like texture, flavour and appearance
- PC2.** select premium ingredients for the specified recipe
- PC3.** clean, prepare and measure ingredients as per the recipe's processing instructions
- PC4.**
  - manage mixture's viscosity by using specialized mixing tools.
  - Mixing Tools: blenders, mixers, emulsifiers, etc
- PC5.** blend seasonings, flavourings, binding agents and any other ingredients to a mixture
- PC6.** ensure precise distribution of ingredients to obtain homogeneity
- PC7.** ensure temperature is under control while mixing so that ingredients are mixed well and mixture is at desired temperature
- PC8.** progressing mixture through extruder machine with a die or shaping mechanism to apply pressure and regulate the mixture's flow
- PC9.**
  - select a suitable die design depending on the form and texture of intended product.
  - Die customization forms: sticks, nuggets and complex patterns
- PC10.** control pressure and temperature within extruder to shape and mold the mixture as it travels through die
- PC11.** implement chopping or molding into required shape as it is extruded through die
- PC12.**
  - facilitate cooking to improve flavour, texture and food safety.
  - Cooking methods: frying, baking, grilling, steaming, microwave cooking
- PC13.** manage cooking temperature and duration to ensure food is cooked appropriately and with safety
- PC14.** facilitate cooling process after cooking so that product can be safely handled and packaged to set texture and to avoid overcooking
- PC15.**
  - administer detailed profiling of flavours and balance their usage.
  - Flavours: umami, sweet, sour, salt, etc.
- PC16.** monitor customer preferences and regional tastes to customize flavour enhancement
- PC17.** perform taste testing to adjust seasoning and fine-tune recipe
- PC18.** ensure precision in shaping to retaining homogeneity of product

- PC19.** facilitate elaborate motifs or patterns for adding visual appeal and individuality to artisanal or custom-extruded items
- PC20.** oversee cutting techniques that are finely tuned to specific product dimensions and decrease waste

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** components of extruder machine operation, such as barrel, screws, and dies
- KU2.** different types of extruders, such as single-screw and twin-screw, and their applications
- KU3.** key extrusion parameters, including temperature pressure, screw speed, and feed rate
- KU4.** how the setting of parameters impacts texture, shape, and structure of extruded product
- KU5.** die design principles and their influence on the product's shape, texture and size
- KU6.** how to select or customize dies based on desired product characteristics
- KU7.** how product's formulation, including ingredients and their properties, affect its extrudability and resultant attributes
- KU8.** ability to increase extrusion results by adjusting formulations
- KU9.** material flow characteristics and rheology, which impact extrusion process
- KU10.** material's elasticity, viscosity and flow characteristics
- KU11.** capacity to recognize and solve typical extrusion problems such as melt fracture, die swell, or screw wear
- KU12.** ability to troubleshoot issues to maintain extrusion quality
- KU13.** safety precautions when using extrusion equipment and working with hot material
- KU14.** how to react in an emergency when there is equipment failure or an accident
- KU15.** extrusion-specific quality control measures, such as visual inspection and product attribute measurement
- KU16.** possibility of guaranteeing product safety and quality requirements

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** read operation manuals and process documents to understand the equipment operation and process requirement
- GS2.** communicate with others effectively
- GS3.** collaborate with team members to increase process efficiency
- GS4.** plan and prioritize tasks to maximize productivity
- GS5.** be punctual and courteous
- GS6.** efficiently manage time to adhere to the production schedule and meet deadline
- GS7.** follow safety standards for self and others
- GS8.** identify and resolve issues
- GS9.** meticulously plan to ensure that parameters are set accurately and consistently

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform processing of extruded products</i>	<b>30</b>	<b>50</b>	-	<b>20</b>
<b>PC1.</b> prepare recipes and formulations specifying ingredient quantities, processing instructions and considering factors like texture, flavour and appearance	2	4	-	1
<b>PC2.</b> select premium ingredients for the specified recipe	1	1	-	1
<b>PC3.</b> clean, prepare and measure ingredients as per the recipe's processing instructions	2	4	-	1
<b>PC4.</b> <ul style="list-style-type: none"> <li>• manage mixture's viscosity by using specialized mixing tools.</li> <li>• Mixing Tools: blenders, mixers, emulsifiers, etc</li> </ul>	1	1	-	1
<b>PC5.</b> blend seasonings, flavourings, binding agents and any other ingredients to a mixture	1	1	-	1
<b>PC6.</b> ensure precise distribution of ingredients to obtain homogeneity	2	4	-	1
<b>PC7.</b> ensure temperature is under control while mixing so that ingredients are mixed well and mixture is at desired temperature	1	1	-	1
<b>PC8.</b> progressing mixture through extruder machine with a die or shaping mechanism to apply pressure and regulate the mixture's flow	2	4	-	1
<b>PC9.</b> <ul style="list-style-type: none"> <li>• select a suitable die design depending on the form and texture of intended product.</li> <li>• Die customization forms: sticks, nuggets and complex patterns</li> </ul>	1	1	-	1
<b>PC10.</b> control pressure and temperature within extruder to shape and mold the mixture as it travels through die	2	4	-	1
<b>PC11.</b> implement chopping or molding into required shape as it is extruded through die	1	1	-	1

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> • facilitate cooking to improve flavour, texture and food safety. • Cooking methods: frying, baking, grilling, steaming, microwave cooking	1	1	-	1
<b>PC13.</b> manage cooking temperature and duration to ensure food is cooked appropriately and with safety	2	4	-	1
<b>PC14.</b> facilitate cooling process after cooking so that product can be safely handled and packaged to set texture and to avoid overcooking	1	1	-	1
<b>PC15.</b> • administer detailed profiling of flavours and balance their usage. • Flavours: umami, sweet, sour, salt, etc.	2	4	-	1
<b>PC16.</b> monitor customer preferences and regional tastes to customize flavour enhancement	1	1	-	1
<b>PC17.</b> perform taste testing to adjust seasoning and fine-tune recipe	2	4	-	1
<b>PC18.</b> ensure precision in shaping to retaining homogeneity of product	1	1	-	1
<b>PC19.</b> facilitate elaborate motifs or patterns for adding visual appeal and individuality to artisanal or custom-extruded items	2	4	-	1
<b>PC20.</b> oversee cutting techniques that are finely tuned to specific product dimensions and decrease waste	2	4	-	1
<b>NOS Total</b>	<b>30</b>	<b>50</b>	<b>-</b>	<b>20</b>

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FIC/N4008
<b>NOS Name</b>	Value added food products - extruded products
<b>Sector</b>	Food Processing
<b>Sub-Sector</b>	Fish and Sea Food
<b>Occupation</b>	Processing-Fish and Seafood
<b>NSQF Level</b>	3.5
<b>Credits</b>	3
<b>Version</b>	1.0
<b>Next Review Date</b>	NA

## Assessment Guidelines and Assessment Weightage

### Assessment Guidelines

Assessment will be based on the concept of Independent Assessors empanelled with Assessment Agencies, identified, selected, trained and certified on Assessment techniques. These assessors would be aligned to assess as per the laid down criteria.

Assessment Agency would conduct assessment only at the training centres of Training Partner or designated testing centers authorized by FICSI.

Ideally, the assessment will be a continuous process comprising of three distinct steps:

- A. Mid- term assessment
- B. Term / Final Assessment

Each National Occupational Standard (NOS) in the respective QPs will be assigned weightage. Therein each Performance Criteria in the NOS will be assigned marks for theory and / or practical based on relative

importance and criticality of function.

This will facilitate preparation of question bank / paper sets for each of the QPs. Each of these papers sets / question bank so created by the Assessment Agency will be validated by the industry subject matter experts through FICSI, especially with regard to the practical test and the defined tolerances, finish, accuracy etc.

The following tools are proposed to be used for final assessment:

i. Written Test: This will comprise of (i) True / False Statements (ii) Multiple Choice Questions (iii) Matching Type Questions. Online system for this will be preferred.

ii. Practical Test: This will comprise a test job to be prepared as per project briefing following appropriate working steps, using necessary tools, equipment and instruments. Through observation it will be possible to ascertain candidate’s aptitude, attention to details, quality consciousness etc. The end product will be measured against the pre-decided MCQ filled by the Assessor to gauge the level of his skill achievements.

iii. Structured Interview: This tool will be used to assess the conceptual understanding and the behavioural aspects as regards the job role and the specific task at hand.

**Minimum Aggregate Passing % at QP Level : 70**

**(Please note:** Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

**Assessment Weightage**

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FIC/N9026.Prepare for production	30	70	-	-	100	20

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FIC/N4005.Carry out pre-processing of fish, seafood, and value-added products.	26	49	0	25	100	20
FIC/N4006.Implementing the processing of fish, seafood and value-added products	24	38	0	38	100	25
FIC/N9906.Apply food safety guidelines in Food Processing	30	60	-	10	100	10
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	5
<b>Total</b>	<b>130</b>	<b>247</b>	<b>-</b>	<b>73</b>	<b>450</b>	<b>80</b>

Elective: 1 Value added food products - mince-based products

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FIC/N4007.Value added food products - mince-based products	26	52	-	22	100	20
<b>Total</b>	<b>26</b>	<b>52</b>	<b>-</b>	<b>22</b>	<b>100</b>	<b>20</b>

Elective: 2 Value added food products - pickled products

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FIC/N4009.Value added food products - pickled products	30	49	-	21	100	20
<b>Total</b>	<b>30</b>	<b>49</b>	<b>-</b>	<b>21</b>	<b>100</b>	<b>20</b>

Elective: 3 Value added food products - battered and breaded or coated products



<b>National Occupational Standards</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>	<b>Total Marks</b>	<b>Weightage</b>
FIC/N4010.Value added food products - battered and breaded or coated products	30	56	-	14	100	20
<b>Total</b>	<b>30</b>	<b>56</b>	<b>-</b>	<b>14</b>	<b>100</b>	<b>20</b>

Elective: 4 Value added food products - intermediate moisture products

<b>National Occupational Standards</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>	<b>Total Marks</b>	<b>Weightage</b>
FIC/N4011.Value added food products - intermediate moisture products	31	56	-	13	100	20
<b>Total</b>	<b>31</b>	<b>56</b>	<b>-</b>	<b>13</b>	<b>100</b>	<b>20</b>

Elective: 5 Value added food products - extruded products

<b>National Occupational Standards</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>	<b>Total Marks</b>	<b>Weightage</b>
FIC/N4008.Value added food products - extruded products	30	50	-	20	100	20
<b>Total</b>	<b>30</b>	<b>50</b>	<b>-</b>	<b>20</b>	<b>100</b>	<b>20</b>

## Acronyms

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training
<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skill Qualification Framework
<b>QP</b>	Qualification Pack
<b>TVET</b>	Technical and Vocational Education and Training
<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualification Pack
<b>TVET</b>	Technical and Vocational Education and Training
<b>MLF</b>	Malolactic Fermentation
<b>TA</b>	Titrateable Acid
<b>pH</b>	Power of Hydrogen
<b>FSSAI</b>	Food Safety and Standards Authority of India
<b>GMPs</b>	Good Manufacturing Practices
<b>HACCP</b>	Hazard Analysis Critical Control Point
<b>VACCP</b>	Vulnerability Assessment Critical Control Points
<b>TACCP</b>	Threat Assessment Critical Control Points
<b>RCA</b>	Root Cause Analysis
<b>CAPA</b>	Corrective Action Preventive Action
<b>PPE</b>	Personal Protective Equipment
<b>CPR</b>	Cardio-Pulmonary Resuscitation
<b>GHP</b>	Good Hygiene Practices

<b>SOPs</b>	Standard Operating Procedures
<b>PwD</b>	People with Disabilities
<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualification Pack
<b>TVET</b>	Technical and Vocational Education and Training
<b>MLF</b>	Malolactic Fermentation
<b>TA</b>	Titratable Acid
<b>pH</b>	Power of Hydrogen
<b>FSSAI</b>	Food Safety and Standards Authority of India
<b>GMPs</b>	Good Manufacturing Practices
<b>HACCP</b>	Hazard Analysis Critical Control Point
<b>VACCP</b>	Vulnerability Assessment Critical Control Points
<b>TACCP</b>	Threat Assessment Critical Control Points
<b>RCA</b>	Root Cause Analysis
<b>CAPA</b>	Corrective Action Preventive Action
<b>PPE</b>	Personal Protective Equipment
<b>CPR</b>	Cardio-Pulmonary Resuscitation
<b>GHP</b>	Good Hygiene Practices
<b>SOPs</b>	Standard Operating Procedures
<b>PwD</b>	People with Disabilities

## Glossary

<b>Sector</b>	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
<b>Scope</b>	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
<b>Knowledge and Understanding (KU)</b>	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.

<b>Organisational Context</b>	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/ Generic Skills (GS)</b>	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
<b>Electives</b>	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
<b>Options</b>	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
<b>Sector</b>	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
<b>Sub-Sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organization
<b>Occupational Standards (OS)</b>	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
<b>Performance Criteria</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standard</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualification Pack</b>	QP comprises the set of OS, together with the educational, training, and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.

<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'.
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for
<b>Scope</b>	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
<b>Knowledge &amp; Understanding (KU)</b>	Knowledge and Understanding (KU) are statements that together specify, the technical, generic, professional, and organizational specific knowledge that an individual needs in order to perform to the required standard.
<b>Organizational Context</b>	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers has of their relevant areas of responsibility.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/Generic skills</b>	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication-related skills that are applicable to most job roles.
<b>Electives</b>	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
<b>Options</b>	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
<b>Sector</b>	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
<b>Sub-Sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.

<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organization
<b>Occupational Standards (OS)</b>	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
<b>Performance Criteria</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standard</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualification Pack</b>	QP comprises the set of OS, together with the educational, training, and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'.
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for
<b>Scope</b>	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
<b>Knowledge &amp; Understanding (KU)</b>	Knowledge and Understanding (KU) are statements that together specify, the technical, generic, professional, and organizational specific knowledge that an individual needs in order to perform to the required standard.
<b>Organizational Context</b>	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers has of their relevant areas of responsibility.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/Generic skills</b>	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication-related skills that are applicable to most job roles.

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<b>Options</b>	<p>Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.</p>